STATEMENT OF BASIS FOR A PROPOSED PERMIT TO MODIFY AN AIR CONTAMINANT SOURCE

Lincoln-Lancaster County Health Department

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LLCHD Air Quality Program Source Number:	**00373**
LLCHD Air Quality Program Construction Permit Number:	**215**
Proposed Effective Date of Permit:	**07 – 05 – 2021**

The Lincoln-Lancaster County Health Department (LLCHD) has made the preliminary determination to issue a permit to construct / reconstruct / modify an air contaminant source to the following:

Permit Holder Name:	**Monolith Nebraska, LLC**
Address:	**134 S. 13th Street – Suite 700**
City, State, ZIP:	**Lincoln, Nebraska 68508**

The proposed permit allows for construction/reconstruction/modification at the following source:

Facility Site Name:	**Monolith Olive Creek 1 and Olive Creek 2**
Facility Address:	**27077 SW 42nd Street**
City, County, State, ZIP:	**Hallam, Lancaster County, Nebraska 68368**
Facility NAICS:	**325180: Other Basic Inorganic Chemical Manufacturing** **325311: Nitrogenous Fertilizer Manufacturing**

In accordance with requirements set forth under Article 2, Section 14 of the Lincoln-Lancaster County Air Pollution Control Programs Regulations and Standards (LLCAPCPRS), the LLCHD may not issue a construction permit until the public has been given the opportunity to comment on the draft permit.

Within the 30-day public comment period, any interested person, agency, group, or affected state may request or petition the Director of the LLCHD for a public hearing. All requests for public hearing must be made in writing, and must state the nature of the issues to be raised and all arguments and factual grounds supporting their position. If a public hearing is granted by the Director, the hearing will be advertised by public notice at least 30 days prior to its occurrence.

A final determination on this permit will be made following the opportunity of the public to review and comment on the draft permit, and any/all comments received have been addressed.

The conclusion of this document will include a recommendation to either approve or deny the issuance of a construction permit for this source.

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Section 1 – Introduction

1.01 – Description of Source and Project

Monolith Nebraska, LLC (hereinafter referred to as 'Monolith' or 'the source') has submitted a permit to construct Monolith Olive Creek 2 (OC2), which will expand upon the existing operation designated Monolith Olive Creek 1 (OC1). On March 5, 2021, Monolith submitted an amended air Construction Permit (CP) application to construct Monolith OC2. Monolith is proposing to construct OC2, which will consist of a new carbon black production facility and an anhydrous ammonia production plant, adjacent to the OC1 plant near Hallam, Nebraska. The OC2 facility will use similar processing equipment but will have a greater processing capacity, with a total carbon black production capacity of 192,000 metric tons per year (192 kilotons/year or 'KTPY'). In addition to carbon black production, OC2 will also include anhydrous ammonia production, which is designed to produce 930 metric tons per day (MTPD) of anhydrous ammonia.

The proposed OC2 facility will produce carbon black and hydrogen gas through a reactor process, in which natural gas is decomposed into carbon black and a by-product 'process gas' consisting mostly of hydrogen. The hydrogen-rich process gas will be compressed, purified by pressure swing adsorption (PSA), and then exported for use as feedstock in an anhydrous ammonia production plant adjacent to the carbon black manufacturing plant at the OC2 facility. The tail gas from the PSA will be combusted in a thermal oxidizer (TO) with a selective catalytic reduction (SCR) NO_X control device. Carbon black and anhydrous ammonia will be produced for sale by Monolith.

When the OC1 air construction permit application was first submitted to LLCHD in 2016 (Construction Permit #185) and modified in 2019 (Construction Permit #185A), future expansion projects were addressed. However, it was not anticipated that OC1 would be aggregated with OC2 as a single stationary source. The OC2 project is in the design phase and the proposed design has

evolved to redirect the OC1 process gas from the OC1 combustor flare (CM-40) through the OC2 process to produce additional hydrogen-rich gas for the back-end production of anhydrous ammonia. The tail gas of the PSA will be sent to the proposed OC2 TO and SCR, resulting in an improved destruction efficiency of the combined OC1 and OC2 tail gas. During the periodic startup and shutdown of the OC1/OC2 reactors, the OC2 process gas will be routed to the OC2 ammonia flare and combustion products emitted to the atmosphere (ATM) through OC2-EP11. Thus, once the OC2 project is constructed and commences commercial operation, the combined emissions from the modified OC1 project and new OC2 project sources will be permitted together. The aggregation of the two facilities prompted the need to revise previously established permit conditions for Monolith OC1. Monolith OC1 and OC2 will comprise a single stationary source as they will be owned and operated by the same owner/operator, they will be located on contiguous or adjacent property, and are both classified under the same Standard Industrial Classification (SIC) "Major Group" number (Major Group 28).

The modified Minor-NSR Air Construction Permit #185A for OC1 was effective January 10, 2020. The OC1 project has been constructed and is being commissioned but has not yet begun commercial operation as of the date of application for OC2. The construction of the OC2 project is not anticipated to be completed until 2024. Therefore, the existing permitted OC1 operation, and the aggregation of the source (modified OC1 project and new OC2 project sources) will be addressed in this application to accommodate the operating scenarios in two phases as follows:

- **Phase 1 (OC1):** The existing OC1 project operation, as previously permitted in Permit No. 185A, will continue until OC2 construction commences. It is estimated that the duration of this permitted phase will occur from January 10, 2020 through some time in 2024.
- **Phase 2 (OC1 and OC2):** The proposed OC2 project will have a reactor block producing carbon black and will use the purified process gas as feedstock to make anhydrous ammonia in an ammonia synthesis plant. Phase 2 begins when 'startup of operation' of OC2 is commenced, which includes the aggregation of a modified OC1 and the new sources of OC2. The Phase 2 normal and Start up, Shutdown, and Malfunction (SSM) operational scenarios are described as follows:
    1. Normal Operation Scenario: The OC1 hydrogen-rich process gas from the Main Unit Filter (MUF) will be combined with the OC2 hydrogen-rich process gas and routed through OC2 hydrogen compressors and then through a pressure swing adsorber (PSA) to purify the process gas for use as feedstock to the ammonia synthesis plant. The combined tail gases from OC1 and OC2 will be combusted in a thermal oxidizer equipped with SCR NO_X control.
    2. Startup/Shutdown Scenario: Following startup of operation of Phase 2, the reactor operation and maintenance procedures require that each reactor shutdown and startup approximately once per month. During the OC2 startup/shutdown scenario, the purge process gas from any of the twelve (12) reactors at OC2 undergoing startup/shutdown is combusted through the OC2 ammonia flare and emitted to the ATM through OC2-EP11. During this scenario, the process gas from OC1 is simultaneously routed to the OC2 PSA and the tail gas is combusted at the OC2 TO with SCR and emitted to the ATM though OC2-EP09. During startup/shutdown of OC1, the purge process gas from the OC1 reactor is combusted through the OC1 flare (OC1-EP41) not to exceed the enforceable limit of 2,000 hours per year for the operation.
    3. Malfunction Scenario: During any malfunctions of the OC2 facility that result in the full shutdown of OC2 normal operations, Monolith intends to operate OC1 independently of OC2 with an enforceable limit of 2,000 hours per year for the OC1 Flare (OC1-EP41).

Due to the proposed aggregation of OC1 and OC2 as a single stationary source in the aforementioned phases, this air construction permit formalizes this aggregation, and the proposed Construction Permit #215 will supersede and replace Construction Permit #185A (issued January 10, 2020) in its entirety. This permitting action is considered a 'minor new source review' (minor NSR) permit according to the provisions of Article 2, Section 17 of the LLCAPCPRS.

1.02 – Phase 2 Carbon Black Production Process Description

The proposed OC2 carbon black manufacturing plant will consist of a reactor block and will integrate the OC1 process gas into the process for use as feedstock for the ammonia synthesis plant. In the reactors, the natural gas is thermally decomposed into carbon and hydrogen. The process gas and carbon black are cooled in the reactors' dedicated heat integration system and sent through Main Unit Filters (MUF), which are high efficiency baghouses, to separate the carbon black from the process gas. The carbon black leaves the MUFs through standpipes that are isolated by rotary valves at the top and bottom and then into a pneumatic conveying line. Nitrogen is purged underneath each rotary valve and into the standpipes to remove the remaining process gas from the carbon black. Inerting filters protect the outgoing nitrogen flow from carrying carbon dust particles.

The process gas is compressed through hydrogen compressors, purified in a PSA, and then exported for use as feedstock for anhydrous ammonia production. A connection from the PSA to the emission control equipment is provided for destruction of the tail gas emitted during PSA regeneration.

Carbon black will be transferred to a higher elevation for gravity feed in the closed process equipment. The carbon black will be conveyed through Process Filters fitted with high efficiency baghouses, by a pneumatic conveying line.

The carbon black from the process filters will be sent to the pelletizers through hammermills and surge bins (a fully enclosed internal process). The hammermill homogenizes the product to a uniform consistency and the surge bin smooths the flow of the product to the carbon black feeder and pelletizer.

The water that is removed from the pellets exits the downstream end of the dryer drum in the form of a water vapor and travels to the high efficiency dryer baghouses before being emitted to the atmosphere through OC2-EP02 and OC2-EP04. The dryer baghouses will remove entrained dust particles (carbon black) from the water vapor and the particles are then pneumatically conveyed to the Process Filters.

The dry carbon black pellets from the dryer drop into a screw conveyor that delivers the pellets to the bucket elevator that conveys the carbon black to the top of the silos. The product passes through a rotary screener with a magnetic separator to remove carbon black cake and any tramp metallic materials (off quality material). The off-quality material drops into off quality silos, and the final product is dropped onto a screw conveyor that feeds the product silos. Each of the silos will be equipped with a bin vent filter to allow the filling and emptying of the silos and to prevent the loss of product during transfer operations. The Dust Filters provide a key quality control process operation by removing dust from the pellets while being transferred in the closed piping system. The Dust Filters control emissions from the bucket elevator, screw conveyors, and from the loading of the railcar and Intermediate Bulk Container (IBC) bags. In addition to the dust filters, the emissions from these operations are controlled by a packaging quality surge bin vent filter, a packaging off-quality surge bin vent filter, and a packaging dust filter. The materials collected by

the dust filters are pneumatically transferred to the process filters to be re-pelletized. The Dust Filters will be equipped with high efficiency baghouses.

From the silo, the product can be loaded in railroad hopper cars, hopper trucks, or packaged into IBC bags for shipment. A Central House Vacuum System will collect waste carbon black from maintenance operations, warehouse packaging, loading, and shipping equipment. The filter will be emptied into IBC bags and taken to a municipal solid waste (MSW) landfill for disposal as non-hazardous waste. The Central House Vacuum will be fitted with a high efficiency baghouse.

Coke produced by the reactors is collected in catch pots and pneumatically conveyed to a coke storage silo. From the silo, the coke product will be loaded into trucks. The emissions from these operations are controlled by high efficiency auger filters and coke blower filters.

In addition, the source will install six diesel-fired emergency generators, a diesel-fired emergency fire pump, a 440,000-gallon proprietary liquid hydrocarbon storage tank, multi-cell cooling tower, and a number of units defined as insignificant activities such as chillers, diesel fuel tanks, space heaters, and equipment leaks components (such as pressure relief valves, bleed valves, etc.).

1.03 – Phase 2 Anhydrous Ammonia Production Process Description

The purified hydrogen from the PSA and nitrogen from an Air Separation Unit (ASU) are routed as feedstock to the ammonia synthesis plant. A process start-up heater is provided for preheating the ammonia synthesis gas for ammonia converter catalyst reduction and for normal plant startup up. The start-up heater will be fired primarily on pure hydrogen gas directly fed from the PSA, but will also be capable of combusting natural gas. The makeup synthesis gas (syngas) is then compressed in preparation for ammonia synthesis. A multi-stage thermodynamic process is used to synthesize ammonia. The compressed syngas passes through a converter that includes numerous heat exchangers to preheat the syngas and a catalyst bed that promotes the reaction of hydrogen and nitrogen to produce ammonia. The reaction is exothermic and is limited by chemical equilibrium, so only part of the hydrogen and nitrogen is converted into ammonia by passing through the catalyst bed.

The effluent gas from the converter is passed through numerous heat exchangers to remove heat. The effluent gas is further cooled until it condenses, then passes through an ammonia separator that disengages the liquid ammonia from the synthesis gas. Most of the vapor from the ammonia separator is routed back to the synthesis gas compressor to be mixed with the makeup syngas, while a small portion of the vapor from the separator is removed from the synthesis loop to purge it of the inert gasses contained in the feedstock (mainly argon). This purge gas is directed to the purge gas ammonia recovery system where ammonia is recovered, and the remaining vapor is directed to the PSA for hydrogen recovery.

Ammonia from the converter and ammonia from the purge gas recovery system are directed to the ammonia refrigeration system, where the product is condensed and sent to the ammonia storage tank as a liquid. Non-condensable gas from the refrigeration process is directed to the ammonia production flare. Due to heat transfer at the ammonia tank during storage and truck loading operations, a portion of the ammonia continuously evaporates, creating a boil-off gas. The boil-off gas is directed to the boil-off gas re-liquefaction package where it is condensed back into liquid and directed back to ammonia storage. A low-pressure, open ammonia process flare is provided to protect the storage tank from any unlikely emergency over-pressure events. The liquid ammonia from the main storage tank is transferred to bullet tanks that support truck loading of the product.

Section 2 – Permitting History

2.01 – Construction Permit #185 – Issued Effective September 5, 2017

This permit was the original construction permit (C.P.) for OC1. This minor-NSR construction permit established emission control requirements that maintained the limited and controlled potential emissions at levels that did not meet or exceed thresholds triggering the need for ambient air quality dispersion modeling. At the time of issuance, OC1 was intended to be designed and constructed as a facility that could operate physically and financially independent of OC2, which was planned for construction subsequent to startup of OC1. Furthermore, Monolith had not yet entered the design phase for OC2, so it was not known at the time that there would later be a need to aggregate the two plants. As such, the permit was issued only for construction and operation emission units associated with OC1.

2.01 – Construction Permit #185A – Issued Effective January 10, 2020

This modified permit was issued to allow for changes in the design for OC1. The process flow remained the same as in C.P. #185. However, there were changes to process parameters, equipment, and feedstock (proprietary liquid hydrocarbon). Changes included: Flare design parameters, Pellet Dryer Heater design parameters, installation of rotary kilns (to treat carbon black), additional carbon black storage silos, and a 30,000-gallon horizontal double-walled storage tank for the liquid hydrocarbon feedstock. In addition, the original design called for two (2) reactor systems, but the source later elected to install one (1) reactor system.

The source exceeded the ambient air quality modeling threshold for NO_2 for this permitting action; therefore, air dispersion modeling was required to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS) for NO_2 in accordance with Article 2, Section 4 of the LLCAPCPRS. The results of the required dispersion modeling showed that the project would not exceed either the NO_2 1-hour or annual NAAQS.

As was the case with issuance of C.P. #185, it was not yet known that there would later be a need to aggregate OC1 and OC2. As such, the permit remained applicable only for construction and operation emission units associated with OC1.

2.03 – Proposed Issuance of Construction Permit #215

This document serves as the factual and legal basis for the proposed issuance of Construction Permit #215 to Monolith for the Construction of the Monolith OC2 facility, which includes the modification of Monolith OC1 and the aggregation of the two facilities into a single source.

Monolith OC2 will expand upon the existing operation designated Monolith OC1. In addition to carbon black being produced with natural gas through a reactor process, OC2 will include the construction of an ammonia synthesis plant, which will produce anhydrous ammonia from hydrogen process gas feedstock sourced from the carbon black process. Monolith submitted an air construction permit application for the construction of OC2 and the modified operation of OC1 that was signed and dated on November 25, 2020. Monolith later submitted an amended application that was signed and dated on March 8, 2021. The March 8, 2021 amended application is considered the 'approved application' on which the proposed permit is based.

This construction permit is considered a 'minor New Source Review' (minor NSR) permit according to the provisions of Article 2, Section 17 of the LLCAPCPRS. The sections that follow provide more information on the source, the nature of emissions from the proposed construction, evaluation of the potential to emit, and a discussion of the conditions set forth in the draft permit.

Section 3 – Source Characterization

3.01 – Permitted Emission Units: Phase 1 – OC1 Operations

The following table includes all emission units that are included under Phase 1 (OC1 Operations). Phase 1 includes only those emission units that are associated with OC1.

Phase 1 – OC1 Operations

Emission Unit (EU)	Source Classification Code (SCC)	Emission Point Description	Emission Segment Description
OC1-EP33	3-01-005-99	OC1 Nitrogen Purge	Nitrogen
OC1-EP40	---	OC1 Carbon Black Reactor	Reactor Process
OC1-EP41-1	3-99-900-24	OC1 Enclosed Flare	Process Gas Destruction
OC1-EP41-2	3-99-900-24	OC1 Flare Pilot	Natural Gas Combustion
OC1-EP55	3-01-005-03	OC1 Main Process Filter	Carbon Black
OC1-EP71-1	3-01-005-07	OC1 Dryer Heater	Process Gas Combustion
OC1-EP71-2	3-03-900-03	OC1 Dryer Heater	Natural Gas Combustion
OC1-EP71-3	3-99-900-24	OC1 Dryer Heater Pilot	Natural Gas Combustion
OC1-EP74	3-01-005-07	OC1 Purge Filter for the Pellet Dryer	Carbon Black
OC1-EP87	3-01-005-06	OC1 Dust Filter	Carbon Black
OC1-EP90	3-01-005-06	OC1 House Vacuum	Carbon Black
OC1-EP100 through OC1-EP108	3-01-005-06	OC1 Silo Vents	Carbon Black
OC1-EP109-1	3-01-005-99	OC1 Rotary Kiln	Natural Gas Combustion
OC1-EP109-2	3-01-005-99	OC1 Rotary Kiln Pilot	Natural Gas Combustion
OC1-EP110	3-01-830-01	OC1 Liquid Hydrocarbon Storage Tank	Fugitive VOC & HAP
OC1-EPEG1	2-02-001-02	OC1 2,011 hp Diesel-Fired Emergency Generator	Diesel Combustion
OC1-EPFP1	2-02-001-02	OC1 215 hp Diesel-Fired Fire Water Pump	Diesel Combustion
OC1-CH94	---	OC1 Chiller	Fugitive GHG & HAP
OC1-HR	A229-40-000-00	OC1 Paved Haul Roads	Fugitive Dust

3.02 – Permitted Emission Units: Phase 2 – OC1 & OC2 Operations

The following table includes all emission units that are included under Phase 2 (OC1 & OC2 Operations). Under Phase 2, emission units from OC1 and OC2 are aggregated into a single stationary source, and as such, Phase 2 includes all emission units associated with both the OC1 and OC2 facilities.

Phase 2 – OC1 and OC2 Operations

Emission Unit (EU)	Source Classification Code (SCC)	Emission Point Description	Emission Segment Description
OC1-EP33	3-01-005-99	OC1 Nitrogen Purge	Nitrogen
OC1-EP40	---	OC1 Carbon Black Reactor	Reactor Process
OC1-EP41-1	3-99-900-24	OC1 Enclosed Flare	Process Gas Destruction
OC1-EP41-2	3-99-900-24	OC1 Flare Pilot	Natural Gas Combustion
OC1-EP55	3-01-005-03	OC1 Main Process Filter	Carbon Black
OC1-EP71-1	3-01-005-07	OC1 Dryer Heater	Process Gas Combustion
OC1-EP71-2	3-03-900-03	OC1 Dryer Heater	Natural Gas Combustion
OC1-EP71-3	3-99-900-24	OC1 Dryer Heater Pilot	Natural Gas Combustion
OC1-EP74	3-01-005-07	OC1 Purge Filter for the Pellet Dryer	Carbon Black
OC1-EP87	3-01-005-06	OC1 Dust Filter	Carbon Black
OC1-EP90	3-01-005-06	OC1 House Vacuum	Carbon Black
OC1-EP100 through OC1-EP108	3-01-005-06	OC1 Silo Vents	Carbon Black
OC1-EP109-1	3-01-005-99	OC1 Rotary Kiln	Natural Gas Combustion
OC1-EP109-2	3-01-005-99	OC1 Rotary Kiln Pilot	Natural Gas Combustion
OC1-EP110	3-01-830-01	OC1 Liquid Hydrocarbon Storage Tank	Fugitive VOC & HAP
OC1-EPEG1	2-02-001-02	OC1 2,011 hp Diesel-Fired Emergency Generator	Diesel Combustion
OC1-EPFP1	2-02-001-02	OC1 215 hp Diesel-Fired Fire Water Pump	Diesel Combustion
OC1-CH94	---	OC1 Chiller	Fugitive GHG & HAP
OC2-EP01-1	3-03-900-03	OC2 North Dryer	Natural Gas Combustion
OC2-EP01-2	3-01-005-07	OC2 North Dryer	Process Gas Combustion
OC2-EP02	3-01-005-06	OC2 North Dryer Baghouse	Carbon Black
OC2-EP03-1	3-03-900-03	OC2 South Dryer	Natural Gas Combustion
OC2-EP03-2	3-01-005-07	OC2 South Dryer	Process Gas Combustion
OC2-EP04	3-01-005-06	OC2 South Dryer Baghouse	Carbon Black
OC2-EP05	2-02-004-01	OC2 3,688 hp / 2,750 kW Standby Generator – A1	Diesel Combustion
OC2-EP06	2-02-004-01	OC2 3,688 hp / 2,750 kW Standby Generator – A2	Diesel Combustion
OC2-EP07	2-02-001-02	OC2 422 hp / 315 kW Diesel-Fired Fire Water Pump	Diesel Combustion
OC2-EP08	2-02-004-01	OC2 1,006 hp / 750 kW ASU Standby Generator	Diesel Combustion
OC2-EP09	3-99-900-24	OC2 Thermal Oxidizer and Pilot	Tail Gas Destruction/Natural Gas Combustion

Phase 2 – OC1 and OC2 Operations

Emission Unit (EU)	Source Classification Code (SCC)	Emission Point Description	Emission Segment Description
OC2-EP10	2-02-004-01	OC2 1,341 hp / 1,000 kW Ammonia Plant Standby Generator	Diesel Combustion
OC2-EP11-1	3-99-900-24	OC2 Ammonia Plant Flare	Ammonia Destruction/Process Gas Combustion
OC2-EP11-2	3-99-900-24	OC2 Ammonia Plant Flare Pilots (6 pilots)	Natural Gas Combustion
OC2-EP12 through OC2-EP15	3-01-005-06	OC2 Classifier Process Filters	Carbon Black
OC2-EP16 and OC2-EP17	3-01-005-06	OC2 Bucket Elevator, Screener, and Rail Loading Dust Filters	Carbon Black
OC2-EP18 through OC2-EP21	3-01-005-06	OC2 Quality Silo Bin Vent Filters – East 1 through 4	Carbon Black
OC2-EP22 through OC2-EP25	3-01-005-06	OC2 Quality Silo Bin Vent Filters – West 1 through 4	Carbon Black
OC2-EP26	3-01-005-06	OC2 Off-Quality Bin Vent Filter – A	Carbon Black
OC2-EP27	3-01-005-06	OC2 Off-Quality Bin Vent Filter – B	Carbon Black
OC2-EP28 through OC2-EP31	3-01-005-06	OC2 Hammermills & Pelletizer Surge Bin Vent Filters (1A/B, 2A/B)	Carbon Black
OC2-EP32	3-01-005-06	OC2 Packaging Quality Surge Bin Vent Filter	Carbon Black
OC2-EP33	3-01-005-06	OC2 Packaging Off-Quality Surge Bin Vent Filter	Carbon Black
OC2-EP38	3-01-005-06	OC2 Packaging Quality/Off-Quality Dust Filter	Carbon Black
OC2-EP40	3-01-005-06	OC2 Central Vacuum / Housekeeping System	Carbon Black
OC2-EP41 thru OC2-EP52	3-01-005-06	OC2 Inerting Filters (12)	Carbon Black
OC2-EP53	A25-30-000-000	OC2 Liquid Hydrocarbon Storage Tank	Fugitive VOC & HAP
OC2-EP54	3-85-001-10	OC2 Dry Cooling Towers (8 Cells)	Fugitive PM
OC2-EP56	2-02-004-01	OC2 5,230 hp / 3,900 kW Standby Generator – B1	Diesel Combustion
OC2-EP57	2-02-004-01	OC2 5,230 hp / 3,900 kW Standby Generator – B2	Diesel Combustion
OC2-EP58	3-03-900-03	OC2 Ammonia Start-up Heater	Natural Gas Combustion/Process Gas Combustions
OC2-EP59 through OC2-EP62	3-01-005-06	OC2 Coke Blowers 1 through 4	Carbon Black
OC2-EP63	3-01-005-06	OC2 Coke Truck Loadout Dust Filter	Carbon Black

Phase 2 – OC1 and OC2 Operations

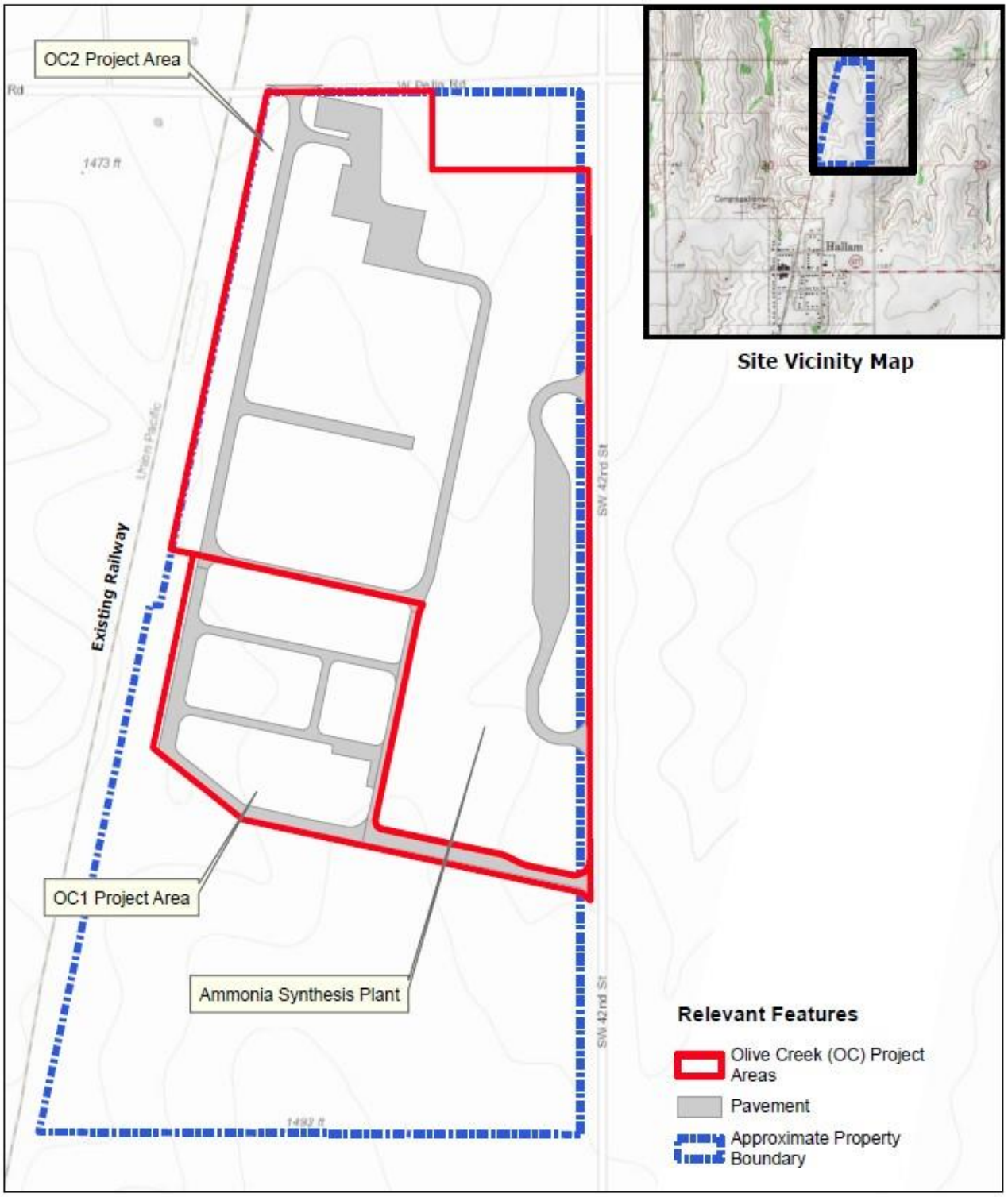
Emission Unit (EU)	Source Classification Code (SCC)	Emission Point Description	Emission Segment Description
OC2-EP64 thru OC2-EP75	3-01-005-06	OC2 Auger Filters (12)	Carbon Black
OCF-HR	A22-96-000-000	OC1 & OC2 Paved Haul Roads	Fugitive PM

3.03 – Insignificant Equipment

It is anticipated that there will be some equipment associated with this source that will have negligible contributions to air pollutant emissions, and for which design specifications and capacity are not yet known, and may not be known until much later in the construction process. Such units would include natural gas-fired space heating and make-up air units, and also diesel storage tanks. While the exact number and associated capacity of such equipment is unknown, the owner/operator will be required to submit an inventory of such equipment following startup of operation of OC2, including information necessary to determine the emissions associated with said equipment. This will allow the Department to assess what impact such equipment may have on overall facility emissions, and to determine if additional air quality impact analysis is appropriate.

3.04 – Source Location & Layout

The following image provides an overhead view of the layout of the Monolith facility, including project areas associated with OC1 and OC2. The Site Vicinity Map shows the location of the source in relation to the village Hallam, Nebraska.



Section 4 – Emission Characterization

4.01 – Emission Calculation Factors and Methods

The procedures for performing emission calculations are provided in Monolith's approved application dated March 5, 2021. These factors and methods will be used to compare pre- and post-modification emissions, as well as provide the emissions information required for the annual emissions inventory. Monolith used emission factors (EFs) from vendor provided information to the greatest extent possible. When vendor provided information was not available, Monolith used EFs from other sources as necessary which include the US Environmental Protection Agency's (US EPA) Compilation of Air Pollutant Emission Factors (AP-42), *WebFIRE*, and other approved sources.

4.02 – Potential to Emit (PTE)

This section examines the potential to emit (PTE) associated with the two phases (Phase 1 and Phase 2). The emission totals presented herein include emission controls and other physical or operational restrictions elected in the construction permit application, as these controls and restrictions will become federally-enforceable limitations on PTE upon permit issuance.

4.02.01 – PTE: Phase 1 Criteria Pollutants, Greenhouse Gases, & Total Hazardous Air Pollutants

The following emission totals represent the PTE criteria pollutants, as well as GHGs and total HAPs associated with Phase 1 – OC1 Operations. The OC1 emissions are based on emissions data established for Construction Permit #185A.

Emission Unit (EU)	Maximum Annual Process Rate	PM (lbs/yr)	PM_{10} (lbs/yr)	$PM_{2.5}$ (lbs/yr)	NO_X (lbs/yr)	SO_X (lbs/yr)	VOC (lbs/yr)	CO (lbs/yr)	CO_2e (lbs/yr)	LEAD (lbs/yr)	Total HAP (lbs/yr)
OC1-EP33	8,760 hrs	78.09	70.28	69.50	-	-	-	-	-	-	-
OC1-EP41-1	8,760 hrs	2,385.80	2,385.80	2,359.30	125,925	353.73	5,807.9	15,268.7	4,229,250	-	1,261.4
OC1-EP41-2	8,760 hrs	16.27	16.27	16.27	214.07	1.28	11.77	179.82	174,282	0.001	4.04
OC1-EP55	8,760 hrs	6,305.1	5,674.6	5,611.5	-	-	-	-	-	-	-
OC1-EP71-1	8,760 hrs	452.54	452.54	447.51	33,953.8	628.98	2,995.9	7,989.1	623,407	-	998.64
OC1-EP71-2	400 hrs	33.71	33.71	33.71	273.60	2.66	136.80	364.80	537,207	-	8.38
OC1-EP71-3	8,760 hrs	11.07	11.07	11.07	145.72	0.87	8.01	122.40	175,307	0.001	2.75
OC1-EP74	8,760 hrs	1,278.7	1,150.9	1,138.1	-	-	-	-	-	-	-
OC1-EP87	8,760 hrs	1,142.8	1,028.5	1,017.1	-	-	-	-	-	-	-
OC1-EP90	8,760 hrs	566.91	510.22	504.55	-	-	-	-	-	-	-
OC1-EP101 thru OC1-EP108	8,760 hrs	447.49	402.74	398.31	-	-	-	-	-	-	-
OC1-EP109-1	8,760 hrs	385.18	385.18	385.18	5,068.1	30.41	278.75	4,257.2	6,097,304	0.03	95.71

Emission Unit (EU)	Maximum Annual Process Rate	PM (lbs/yr)	PM_{10} (lbs/yr)	$PM_{2.5}$ (lbs/yr)	NO_X (lbs/yr)	SO_X (lbs/yr)	VOC (lbs/yr)	CO (lbs/yr)	CO_2e (lbs/yr)	LEAD (lbs/yr)	Total HAP (lbs/yr)
OC1-EP109-2	8,760 hrs	94.15	94.15	94.15	1,238.8	7.43	68.13	1,050.6	1,490,328	0.006	23.39
OC1-EP110	8,760 hrs	-	-	-	-	-	-	-	-	-	780.00
OC1-EPEG1	100 hrs	17.72	17.72	17.72	3,016.5	2.55	70.79	402.20	230,285	-	2.22
OC1-EPFP1	100 hrs	5.27	5.27	5.27	117.30	44.08	2.95	56.55	24,620	-	0.58
OC1-CH94	8,760 hrs	-	-	-	-	-	-	-	115,606	-	38.11
OC1-HR	8,760 hrs	283.28	56.66	13.91	-	-	-	-	-	-	-
Total Emissions (pounds per year)		13,470.4	12,261.9	12,089.4	169,679.3	1,069.3	9,244.2	29,326.6	13,160,389	0.04	3,206.8
Total Emissions (tons per year)		6.735	6.131	6.045	84.840	0.535	4.622	14.663	6,580.2	<0.001	1.603

Additional Notes:

- The cells that are shaded ORANGE have had their values omitted from the 'Total Emissions', as the full-year operation on both natural gas and process gas represents mutually-exclusive operating scenarios. Only the worst-case emissions were included in the total emissions.
- For OC1-EP41-1, emissions include combustion emissions from the flare and PM from the Main Unit Filter.

4.02.02 – PTE: Phase 2 Criteria Pollutants, Greenhouse Gases, & Total Hazardous Air Pollutants

The following emission totals represent the PTE criteria pollutants, as well as GHGs and total HAPs associated with Phase 2 – OC1 and OC2 Operations. The OC1 emissions are based on emissions data established for Construction Permit #185A, with revisions made to reflect the modifications to processes that will occur with OC2.

Emission Unit (EU)	Maximum Annual Process Rate	PM (lbs/yr)	PM_{10} (lbs/yr)	$PM_{2.5}$ (lbs/yr)	NO_X (lbs/yr)	SO_X (lbs/yr)	VOC (lbs/yr)	CO (lbs/yr)	CO_2e (lbs/yr)	LEAD (lbs/yr)	Total HAP (lbs/yr)
OC1-EP33	8,760 hrs	78.09	70.28	69.50	-	-	-	-	-	-	-
OC1-EP41-1	2,000 hrs	552.04	552.04	372.08	28,750.0	80.76	1,326.0	3,486.0	965,582	-	288.00
OC1-EP41-2	8,760 hrs	16.27	16.27	16.27	214.07	1.28	11.77	179.82	174,282	0.001	4.04
OC1-EP55	8,760 hrs	6,305.1	5,674.6	5,611.5	-	-	-	-	-	-	-
OC1-EP71-1	8,760 hrs	452.54	452.54	447.51	33,953.8	628.98	2,995.9	7,989.1	623,407	-	998.64
OC1-EP71-2	400 hrs	33.71	33.71	33.71	273.60	2.66	136.80	364.80	537,207	-	8.38
OC1-EP71-3	8,760 hrs	11.07	11.07	11.07	145.72	0.87	8.01	122.40	175,307	0.001	2.75
OC1-EP74	8,760 hrs	1,278.7	1,150.9	1,138.1	-	-	-	-	-	-	-
OC1-EP87	8,760 hrs	1,142.8	1,028.5	1,017.1	-	-	-	-	-	-	-
OC1-EP90	8,760 hrs	566.91	510.22	504.55	-	-	-	-	-	-	-
OC1-EP101 thru OC1-EP108	8,760 hrs	447.49	402.74	398.31	-	-	-	-	-	-	-
OC1-EP109-1	8,760 hrs	385.18	385.18	385.18	5,068.1	30.41	278.75	4,257.2	6,097,304	0.03	95.71
OC1-EP109-2	8,760 hrs	94.15	94.15	94.15	1,238.8	7.43	68.13	1,050.6	1,490,328	0.006	23.39
OC1-EP110	8,760 hrs	-	-	-	-	-	-	-	-	-	780.00
OC1-EPEG1	100 hrs	17.72	17.72	17.72	3,016.5	2.55	70.79	402.20	230,285	-	2.22
OC1-EPFP1	100 hrs	5.27	5.27	5.27	117.30	44.08	2.95	56.55	24,620	-	0.58
OC1-CH94	8,760 hrs	-	-	-	-	-	-	-	115,606	-	38.11
OC2-EP01-1	8,760 hrs	4,362.5	4,362.5	4,362.5	10,748.9	344.31	3,157.0	1,791.5	68,559,376	0.29	1,083.7
OC2-EP01-2	8,760 hrs	-	-	-	-	-	-	-	-	-	-
OC2-EP02	8,760 hrs	847.87	847.87	568.07	-	-	-	-	-	-	-
OC2-EP03-1	8,760 hrs	4,362.5	4,362.5	4,362.5	10,748.9	344.31	3,157.0	1,791.5	68,559,376	0.29	1,083.7
OC2-EP03-2	8,760 hrs	-	-	-	-	-	-	-	-	-	-
OC2-EP04	8,760 hrs	847.87	847.87	568.07	-	-	-	-	-	-	-

Emission Unit (EU)	Maximum Annual Process Rate	PM (lbs/yr)	PM_{10} (lbs/yr)	$PM_{2.5}$ (lbs/yr)	NO_X (lbs/yr)	SO_X (lbs/yr)	VOC (lbs/yr)	CO (lbs/yr)	CO_2e (lbs/yr)	LEAD (lbs/yr)	Total HAP (lbs/yr)
OC2-EP05	100 hrs	32.52	32.52	32.52	7,528.6	4.48	138.22	463.42	421,572	-	11.27
OC2-EP06	100 hrs	32.52	32.52	32.52	7,528.6	4.48	138.22	463.42	421,572	-	11.27
OC2-EP07	100 hrs	7.64	7.64	7.64	263.89	86.60	3.47	62.50	48,380	-	1.91
OC2-EP08	100 hrs	4.43	4.43	4.43	1,022.2	1.22	6.65	59.87	114,974	-	3.07
OC2-EP09	8,760 hrs	-	-	-	17,958.0	-	-	71,893.3	79,465,413	-	15,587.1
OC2-EP10	100 hrs	11.83	11.83	11.83	1,510.7	1.63	17.74	62.09	153,299.	-	4.10
OC2-EP11-1	8,760 hrs	785.01	785.01	734.55	18,152.7	72.41	827.85	7,955.4	10,176,067	0.04	1,016.6
OC2-EP11-2	8,760 hrs	27.54	27.54	27.54	1,449.7	8.70	79.73	1,217.7	1,731,455	0.01	27.40
OC2-EP12	8,760 hrs	2,818.7	2,818.7	1,888.5	-	-	-	-	-	-	-
OC2-EP13	8,760 hrs	2,818.7	2,818.7	1,888.5	-	-	-	-	-	-	-
OC2-EP14	8,760 hrs	2,818.7	2,818.7	1,888.5	-	-	-	-	-	-	-
OC2-EP15	8,760 hrs	2,818.7	2,818.7	1,888.5	-	-	-	-	-	-	-
OC2-EP16	8,760 hrs	934.51	934.51	626.12	-	-	-	-	-	-	-
OC2-EP17	8,760 hrs	934.51	934.51	626.12	-	-	-	-	-	-	-
OC2-EP18	8,760 hrs	724.59	724.59	485.48	-	-	-	-	-	-	-
OC2-EP19	8,760 hrs	724.59	724.59	485.48	-	-	-	-	-	-	-
OC2-EP20	8,760 hrs	724.59	724.59	485.48	-	-	-	-	-	-	-
OC2-EP21	8,760 hrs	724.59	724.59	485.48	-	-	-	-	-	-	-
OC2-EP22	8,760 hrs	724.59	724.59	485.48	-	-	-	-	-	-	-
OC2-EP23	8,760 hrs	724.59	724.59	485.48	-	-	-	-	-	-	-
OC2-EP24	8,760 hrs	724.59	724.59	485.48	-	-	-	-	-	-	-
OC2-EP25	8,760 hrs	724.59	724.59	485.48	-	-	-	-	-	-	-
OC2-EP26	8,760 hrs	724.59	724.59	485.48	-	-	-	-	-	-	-
OC2-EP27	8,760 hrs	724.59	724.59	485.48	-	-	-	-	-	-	-
OC2-EP28	8,760 hrs	434.76	434.76	291.29	-	-	-	-	-	-	-
OC2-EP29	8,760 hrs	434.76	434.76	291.29	-	-	-	-	-	-	-
OC2-EP30	8,760 hrs	434.76	434.76	291.29	-	-	-	-	-	-	-
OC2-EP31	8,760 hrs	434.76	434.76	291.29	-	-	-	-	-	-	-
OC2-EP32	8,760 hrs	434.76	434.76	291.29	-	-	-	-	-	-	-

Emission Unit (EU)	Maximum Annual Process Rate	PM (lbs/yr)	PM_{10} (lbs/yr)	$PM_{2.5}$ (lbs/yr)	NO_X (lbs/yr)	SO_X (lbs/yr)	VOC (lbs/yr)	CO (lbs/yr)	CO_2e (lbs/yr)	LEAD (lbs/yr)	Total HAP (lbs/yr)
OC2-EP33	8,760 hrs	434.76	434.76	291.29	-	-	-	-	-	-	-
OC2-EP38	8,760 hrs	3,594.0	3,594.0	2,408.0	-	-	-	-	-	-	-
OC2-EP40	8,760 hrs	3,193.9	3,193.9	2,103.7	-	-	-	-	-	-	-
OC2-EP41 thru OC2-EP52	8,760 hrs	324.62	324.62	217.49	-	-	-	-	-	-	-
OC2-EP53	8,760 hrs	-	-	-	-	-	-	-	-	-	4,927.7
OC2-EP54	8,760 hrs	31.16	31.16	-	-	-	-	-	-	-	-
OC2-EP56	100 hrs	92.24	92.24	92.24	9,189.5	6.35	253.67	1,406.7	597,866	-	15.98
OC2-EP57	100 hrs	92.24	92.24	92.24	9,189.5	6.35	253.67	1,406.7	597,866	-	15.98
OC2-EP58	400 hrs	176.18	176.18	176.18	2,318.2	13.91	127.50	1,947.3	2,768,834	0.01	43.77
OC2-EP59	8,760 hrs	779.66	779.66	522.37	-	-	-	-	-	-	-
OC2-EP60	8,760 hrs	779.66	779.66	522.37	-	-	-	-	-	-	-
OC2-EP61	8,760 hrs	779.66	779.66	522.37	-	-	-	-	-	-	-
OC2-EP62	8,760 hrs	779.66	779.66	522.37	-	-	-	-	-	-	-
OC2-EP63	8,760 hrs	434.76	434.76	291.29	-	-	-	-	-	-	-
OC2-EP64 thru OC2-EP75	8,760 hrs	4.41	4.41	2.96	-	-	-	-	-	-	-
OCF-HR	8,760 hrs	3,235.9	647.17	158.85	-	-	-	-	-	-	-
Total Emissions (pounds per year)		59,971.6	56,401.0	43,841.5	170,113.5	1,691.1	12,923.1	108,065.1	243,512,772	0.67	26,066.9
Total Emissions (tons per year)		29.986	28.201	21.921	85.057	0.846	6.462	54.033	121,756	<0.001	13.033

Additional Notes:

- The cells that are shaded ORANGE have had their values omitted from the 'Total Emissions', as the full-year operation on both natural gas and process gas represents mutually-exclusive operating scenarios. Only the worst-case emissions were included in the total emissions.

4.02.03 – PTE: Net Change in Emissions from Phase 1 to Phase 2

The following table compares the potential to emit from Phase 1 (OC1 only) to minor-NSR construction permit thresholds, also compares the aggregated emissions of both OC1 and OC2 (Phase 2) to minor-NSR construction permit thresholds. Because the facility is not a major source for PSD purposes, and because none of the emissions exceed the 100-ton threshold for PSD significance

for this project (which will be discussed later on in further detail), the PTE from Phase 1 and Phase 2 are only compared to the minor-NSR construction permit thresholds. Additionally, the last column in the following table shows the increases in PTE from Phase 1 to Phase 2.

Regulated NSR Pollutants	Phase 1 Potential Emissions (tpy)	Minor-NSR Permitting Thresholds	Phase 1 PTE Meet or Exceed Thresholds?	Phase 2 Potential Emissions (tpy)	Phase 2 PTE Meet or Exceed Thresholds?	Net Change in Emissions (Phase 2 minus Phase 1) (tpy)
PM	6.735	N/A	N/A	29.986	N/A	+ 23.251
PM_{10}	6.131	15.0 tpy	No	28.201	**Yes**	+ 22.070
$PM_{2.5}$	6.045	10.0 tpy	No	21.921	**Yes**	+ 15.876
NO_X	84.840	40.0 tpy	**Yes**	85.057	**Yes**	+ 0.217
SO_2	0.535	40.0 tpy	No	0.846	No	+ 0.311
VOC	4.622	40.0 tpy	No	6.462	No	+ 1.840
CO	14.663	50.0 tpy	No	54.033	**Yes**	+ 39.370
Lead	<0.001	0.6 tpy	No	<0.001	No	---
CO_2e [A]	6,580.2	N/A	N/A	121,756	N/A	+ 115,175.8
Hazardous Air Pollutants (HAPs)	**Phase 1 Potential Emissions (tpy)**	**Minor-NSR Permitting Thresholds**	**Phase 1 PTE Meet or Exceed Thresholds?**	**Phase 2 Potential Emissions (tpy)**	**Phase 2 PTE Meet or Exceed Thresholds?**	**Net Change in Emissions (Phase 2 minus Phase 1) (tpy)**
Hydrogen Cyanide [B]	1.130	2.50 tpy	No	8.910	**Yes**	+ 7.780
Total Combined HAPs	1.603	10.0 tpy	No	13.033	**Yes**	+ 11.430

As shown in the table in Sections 4.02.01 and 4.02.02 above, Phase 1 only exceeded the minor-NSR permitting threshold for NO_X. However, emissions from Phase 2 exceed the minor-NSR permitting thresholds for PM_{10}, $PM_{2.5}$, NO_X, CO, individual HAPs, and total combined HAPs.

[A] The PSD major source threshold for CO_2e is 100,000 tpy, but a source cannot be a major source for PSD solely for GHG emissions pursuant to the U.S. Supreme Court ruling in *Utility Air Regulatory Group v. EPA, 134 S. Ct. 2427 (2014)*.

[B] Hydrogen cyanide is the greatest single HAP in both Phase 1 and Phase 2, and is presented here for comparison to the 2.5 ton/year construction permit and 'toxics BACT' or 'T-BACT' threshold for individual HAPs.

4.03 – Permit Threshold Evaluation

As reflected in the tables in Sections 4.02.03, the project will result in a potential net emissions increase that exceeds the minor NSR construction permit thresholds, and as a result a construction permit is required for this project. The following discuss other applicable NSR permitting thresholds, as well as thresholds for additional air quality analysis requirements.

4.04 – Minor New Source Review (Minor-NSR) and Prevention of Significant Deterioration of Air Quality Applicability (PSD) Determination

For the purposes of determining applicability of minor-NSR and PSD, the Department has determined that this facility belongs in the 'chemical process plants' stationary source category set forth in NDEE Title 129, Chapter 2, Section 008.01. As such, the PSD applicability threshold for this source is 100 tons per year of any regulated NSR pollutant.

As reflected in Section 4.02.03, neither Phase 1 nor Phase 2 potential emissions exceed 100 tons per year for any regulated NSR pollutant. Accordingly, this facility is not a major source for PSD purposes, and potential emissions do not constitute a 'major modification' for PSD purposes. As such, only minor-NSR permitting requirements apply to this permitting action.

4.05 – Air Toxics 'Best Available Control Technology' (T-BACT) Applicability Determination and Discussion

In accordance with LLCAPCPRS Article 2, Section 27, paragraph (B), an owner/operator may not construct/reconstruct/modify a source where the potential to emit HAPs equals or exceeds 2.5 tons per year for any individual HAP, or equals or exceeds 10 tons per year for total combined HAPs.

4.05.01 – Phase 1 T-BACT

As reflected in Section 4.02.03, neither Phase 1 individual HAP or total combined HAP emissions equal or exceed the HAP thresholds for T-BACT. As such, a T-BACT analysis was not required for the initial construction of OC1, and HAP emission controls were not required for OC1. However, it is worth noting that the flare associated with Phase 1, which was installed for the purposes of destroying the hydrogen-rich process gas, would also control any organic HAP emissions from the OC1 reactor process.

4.05.01 – Phase 2 T-BACT

As reflected in Section 4.02.03, Phase 2 HAP emissions exceed both the individual HAP and total combined HAP T-BACT thresholds. The primary source of HAP emissions is the reactor process, while fuel combustion sources and fugitive losses from the liquid hydrocarbon storage tank also contribute emissions of HAP that are a much smaller portion of total HAP emissions. It is worth noting that, for the smaller sources of HAP emissions, none have the potential to equal or exceed the 2.5 ton/year or 10 ton/year thresholds individually. For the purposes of this permit, the Department has determined T-BACT for the following to be as provided:

- Emergency Engines: Owner/operator will comply with 40 CFR Part 60, Subpart IIII (NSPS for Stationary Compression Ignition Internal Combustion Engines);
- Dryers, Kilns, and Heaters: Owner/ operator will utilize good combustion practices;
- Chiller: Owner/operator will comply with applicable requirements set forth under 40 CFR Part 82 (Protection of Stratospheric Ozone), as they apply to refrigeration systems using hydrofluorocarbon (HFC) refrigerants;

- Flare and Thermal Oxidizer: These units are considered emission control devices, and are not subject to further controls; and
- Liquid Hydrocarbon Storage Tank: Owner/operator shall comply with 40 CFR Part 60, Subpart Kb (NSPS for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984).

The reactor processes are the most significant source of potential HAP emissions, with the pollutant of greatest concern being hydrogen cyanide (HCN). The applicant provided a T-BACT analysis with the approved application. The T-BACT analysis indicated that a search of the RACT/BACT/LAER Clearinghouse (RBLC) failed to identify any emission controls or pollutant specific emission limits for HCN. A search of the RBLC by Department staff confirmed this finding. The T-BACT analysis submitted with approved application proposes a thermal oxidizer (TO) for control of HCN from both the OC1 and OC2 reactor processes during normal operation, and the use of the enclosed flare for control of HCN during periods of startup, shutdown, and malfunction (SSM). The Department accepts this proposal based on the following:

- Both devices will achieve a very high HAP emission control efficiency, with the TO controlling 99.9% of HCN emissions, and the flare controlling 98.0% of HCN emissions;
- Thermal oxidizers have long been recognized as highly effective emission controls for organic HAP compounds, and are often chosen as BACT or mandated as 'Maximum Achievable Control Technology' (MACT) through 40 CFR Part 63 regulations;
- The flare will achieve a lower control efficiency, but will only be used for periods of SSM, and is subject to a limit on annual hours of operation;
- The owner/operator will be required to conduct performance testing on both emission control units to demonstrate compliance with the minimum required emission control efficiency as required in Condition XXIX(C) of the proposed permit.

4.06 – Ambient Air Quality Impact Analysis

In accordance with LLCAPCPRS Article 2, Section 17, paragraph (H), the Director may require construction permit applicants to perform an air quality impact analysis to determine the concentration of pollutants expected to occur in the vicinity of the source. Consistent with the approach used by the NDEE, air dispersion modeling is required for any construction, modification, or reconstruction when the significant net emissions increase equals or exceeds the 'Significant Emission Rates' set forth in the NDEE's modeling guidance.

Pollutant	SER (tons/year)
PM_{10}	15.0
$PM_{2.5}$	10.0
NO_2	40.0
SO_2	40.0
CO	100.0
Lead	0.6
Total Reduced Sulfur (inc. H_2S)	10.0

Reference: NDEE Title 129 Chapter 19, Section 010 and 40 CFR Part 51, §51.166 (23)(i)

4.06.01 – Phase 1 Dispersion Modeling & NAAQS Compliance

As reflected in Section 4.02.01, emissions of NO_X from Phase 1 exceeded the SER and Monolith was required to conduct NO_X modeling as part of the permitting process for Construction Permit #185A. Potential emissions of all other regulated NSR pollutants were lower than the modeling thresholds, so modeling was not required for other pollutants at that time.

The dispersion modeling results indicated that NO_2 concentrations did not meet or exceed the 'Significant Impact Level' (SIL) of 1.0 µg/m³ for the annual NO_2 primary and secondary NAAQS. As a result, a comprehensive modeling analysis was not required for the annual NO_2 emissions for OC1. However, NO_2 concentrations did exceed the SIL of 7.5 µg/m³ for the 1-hour primary NAAQS, so a comprehensive modeling analysis for NO_2 was required.

For background NO_2 concentration, the Department approved the use of the Trego County, Kansas NO_2 monitoring site (ID# 2019500001). The background concentration at that site was 5.33 µg/m³. The maximum modeled cumulative NO_2 concentration resulting OC1 emissions was 37.88 µg/m³ (8th highest high over a 5-year period). When the background concentration was combined with the maximum modeled cumulative concentration, the resulting total concentration was 43.21 µg/m³ (equivalent to 22.98 ppb). The 1-hour NO_2 NAAQS is 100 ppb (based on 98th percentile of daily 1-hour maximum concentrations averaged over 3 years). As demonstrated in the modeling analysis, Monolith was in compliance with the NO_2 NAAQS.

4.06.02 – Phase 2 Dispersion Modeling & NAAQS Compliance

Prior to submitting the approved application, the Department determined that Monolith would not be required to conduct dispersion modeling for NO_2 emissions from OC2, as the potential emissions of NO_2 increased only slightly (less than 500 pounds/year), and because NO_2 modeling for OC1 had shown that off-site concentrations of NO_2 were well below the annual SIL and the 1-hour NAAQS. The only other pollutants for which combined OC1 and OC2 emissions (i.e. Phase 2) exceeded the SERs were PM_{10} and $PM_{2.5}$. Monolith submitted a modeling protocol for OC2 emissions of PM_{10} and $PM_{2.5}$, and an ambient air quality impact analysis was prepared in accordance with the NDEE's PSD and Minor Source Modeling Guidance.

The dispersion modeling results indicated that PM_{10} and $PM_{2.5}$ exceeded the 'Significant Impact Level' (SIL) of 5.0 µg/m³ for the 24-hour primary and secondary PM_{10} standard, the EPA-recommended SIL of 1.2 µg/m³ for the 24-hour primary and secondary $PM_{2.5}$ standard, and the EPA-recommended SIL of 0.2 µg/m³ for the annual primary $PM_{2.5}$ standard. As a result, a comprehensive modeling analysis was required to demonstrate compliance with each of the aforementioned NAAQS. Results were as follows:

- PM_{10} 24-hour NAAQS of 150 µg/m³: The 6th highest modeled 24-hour design concentration over 5 years of meteorological data (23.2 µg/m³) was combined with the Nebraska state-wide default value background 24-hour concentration (60 µg/m³), resulting in a total concentration of 83.2 µg/m³, which is below the 150 µg/m³ PM_{10} 24-hour NAAQS.
- $PM_{2.5}$ 24-hour NAAQS of 35 µg/m³: The 8th highest modeled 24-hour design concentration over 5 years of meteorological data (16.1 µg/m³) was combined with the LLCHD monitoring site (ID# 311090022) background 24-hour concentration (18.3 µg/m³), resulting in a total concentration of 34.4 µg/m³, which is below the 35.0 µg/m³ $PM_{2.5}$ 24-hour NAAQS.

- $PM_{2.5}$ Annual NAAQS of 12 µg/m³: The 1st highest modeled annual design concentration over 5 years of meteorological data (2.8 µg/m³) was combined with the LLCHD monitoring site (ID# 311090022) background annual concentration (6.8 µg/m³), resulting in a total concentration of 9.6 µg/m³, which is below the 12.0 µg/m³ $PM_{2.5}$ 24-hour NAAQS. It is worth noting here that the modeled concentration was also below the annual $PM_{2.5}$ secondary NAAQS of 15.0 µg/m³.

As demonstrated in the modeling results discussed above, Monolith will be in compliance with all primary and secondary NAAQS for both PM_{10} and $PM_{2.5}$.

Section 5 – Applicable Regulations & Requirements

5.01 – Applicable Regulations under the LLCAPCPRS

(A) The following sections (§) of the LLCAPCPRS are requirements of the proposed permit:

Table 1-A: Applicable Regulations of the LLCAPCPRS

Article 1: Administration and Enforcement	
§1	Intent
§2	Unlawful Acts – Permits Required
§3	Violations – Hearings – Orders
§4	Appeal Procedure
§5	Variance
§6	Annual Fees
§7	Compliance – Actions to Enforce – Penalties for Non-Compliance
§8	Procedure for Abatement
§9	Severability
Article 2: Regulations and Standards	
§1	Definitions
§2	Major Sources – Defined
§4	Ambient Air Quality Standards
§6	Emissions Reporting – When Required
§14	Permits – Public Participation
§15	Permit Modifications – Reopening for Cause
§16	Stack Heights – Good Engineering Practice (GEP)
§17	Construction Permits – When Required
§18	New Source Performance Standards (NSPS)
§20	Particulate Emissions – Limitations and Standards
§24	Sulfur Compound Emissions – Existing Sources – Emission Standards
§27	Hazardous Air Pollutants – Maximum Achievable Control Technology (MACT)
§28	Hazardous Air Pollutants – MACT Emission Standards
§32	Dust – Duty to Prevent Escape Of
§33	Compliance – Time Schedule For
§34	Emission Sources – Testing and Monitoring
§35	Compliance – Exceptions Due to Startup, Shutdown, or Malfunction
§36	Control Regulations – Circumvention – When Excepted
§37	Compliance – Responsibility of Owner/Operator Pending Review by Director
§38	Emergency Episodes – Occurrence and Control – Contingency Plans
Appendices	
I	Emergency Emission Reduction Regulations
II & III	Hazardous Air Pollutants (HAPs)

5.02 – Non-Applicable Regulations under the LLCAPCPRS

(B) The following sections of the LLCAPCPRS are not requirements of the proposed permit:

Table 1-B: LLCAPCPRS Regulations not Incorporated in Permit

Article 2: Regulations and Standards	
§5	Operating Permits – When Required
§7	Operating Permits – Application
§8	Operating Permits – Content
§9	General Operating Permits for Class I and II Sources
§10	Operating Permits for Temporary Sources & Notification of Relocation of…
§11	Emergency Operating Permits – Defense
§12	Operating Permit Renewal and Expiration
§13	Class I Operating Permit – EPA Review – Affected States Review
§19	Prevention of Significant Deterioration (PSD) of Air Quality
§21	Compliance Assurance Monitoring (CAM)
§22	Incinerator Emission Standards
§23	Hazardous Air Pollutants – Emission Standards
§25	Nitrogen Oxides – Emissions Standards for Existing Stationary Sources
§26	Acid Rain
§29	Operating Permit Emission Fees
§3, §30, §31	Reserved

(C) The following regulation(s) set forth under Title 129 of the Nebraska Administrative Code (Nebraska Air Quality Regulations) are not requirements of the proposed permit:

Table 1-C: Non-Applicable State Air Quality Regulations

Regulation	**Regulation Title**
Chapter 19	Prevention of Significant Deterioration of Air Quality*
* *Title 129 Chapter 19 applies to this source, as it is a major source for PSD purposes. However, none of the requirements of this permit are established pursuant to Chapter 19.*	

(D) The following Federal Regulations, including those not currently delegated to the LLCHD or not yet included in the LLCAPCPRS, are requirements of the proposed permit:

Table 1-D: Applicable Federal Regulations

40 CFR Part 60: New Source Performance Standards (NSPS)	
Subpart	*Subpart Subject*
A	General Provisions
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984
IIII	Stationary Compression Ignition Internal Combustion Engines
40 CFR Part 63: Source Category NESHAPs	
Subpart	*Subpart Subject*
A	General Provisions
ZZZZ	Stationary Reciprocating Internal Combustion Engines
40 CFR Part 68: Chemical Accident Prevention Provisions	
Subpart	*Subpart Subject*
A	General Provisions
B	Hazard Assessment
C	Program 2 Prevention Program
D	Program 3 Prevention Program
E	Emergency Response

Table 1-D: Applicable Federal Regulations

40 CFR Part 68: Chemical Accident Prevention Provisions	
Subpart	*Subpart Subject*
F	Regulated Substances for Accidental Release Prevention
G	Risk Management Plan
40 CFR Part 82: Protection of Stratospheric Ozone	

(E) The following Federal Regulations, including those not currently delegated to the LLCHD or not yet included in the LLCAPCPRS, are not requirements of the proposed permit:

Table 1-E: Federal Regulations not Incorporated in Permit

Regulation	Non-Applicable Subparts, Section(s), or Appendix
40 CFR Part 51	Appendix S: Emission Offset Interpretive Ruling
40 CFR Part 52	Subpart A §52.21: Prevention of Significant Deterioration of Air Quality
40 CFR Part 60	All subparts, except those listed as applicable in **Table 1-D**
40 CFR Part 61	Entire rule is non-applicable at the time of permit issuance
40 CFR Part 63	All subparts, except those listed as applicable in **Table 1-D**
40 CFR Part 64	Entire rule is non-applicable at the time of permit issuance
40 CFR Part 70	Entire rule is non-applicable at the time of permit issuance
40 CFR Part 98	Entire rule is non-applicable at the time of permit issuance

Section 6 – Discussion of Proposed Permit Requirements

The following conditions of the proposed permit contain monitoring, reporting, notification, and record keeping requirements. A brief description of these conditions is provided below:

6.01 – General Conditions

Conditions II through XXV are general conditions that are applicable to all permitted sources. There will not be an in-depth discussion of these requirements, except to note the following General Conditions specifically related to monitoring, reporting, notification, and record-keeping:

- VI – Fees
- XI – Annual Emission Reporting
- XII(E) – Notification of Source Modifications
- XIV(E) – Permit Copy Maintenance and Retention
- XXII(G) – 'Credible Evidence Rule'
- XXIII – Startup, Shutdown, and Malfunction (SSM) Provisions

6.02 – Specific Conditions

The following are specific conditions of the proposed construction permit. Because the OC1 plant will remain operational until the startup of operations of OC2, the permit has been structured in such a way that specific conditions applicable to OC1 (Conditions XXVII(A)-(G)), which have largely been based on the preceding Construction Permit #185A, will remain applicable while OC2 is being constructed and prepared for startup. Once startup of operation of OC2 occurs, the facility will enter 'Phase 2' and a new set of specific conditions will take effect (Conditions XXVIII(A)-(H), XXIX(A)(1), XXIX(C)(1)-(3)). The new specific conditions for Phase 2 will be in addition to specific conditions for Phase 1, except where Phase 2 requirements supersede a Phase 1 requirement. An example of this would be that, during Phase 1, there is no limit on the hours of operation of OC1-EP41 (OC1 Enclosed Flare). However, upon entering Phase 2, the OC1 Enclosed Flare be limited to 2,000 hours of operation per year. The combined Phase 1 and Phase 2 requirements reflect the aggregation of OC1 and OC2 into a single stationary source.

XXVII. – Requirements for 'Phase 1 – OC1 Operations'. These conditions apply to the facility and emission unit(s) identified as 'Permitted Emission Units' for 'Phase 1' on page 3 of the proposed permit.

(A) Operating Requirements, Throughput Limits, and/or Work Practice Standards.

The requirements set forth under this condition serve to:

- establish allowable fuel and material types, processing rates that are consistent with the owner/operator's approved permit application, and the provided supporting documentation;
- incorporate elected limits on hours of operation from the approved application as a requirement of the permit;
- incorporate fuel requirements established in 40 CFR 60 Subpart IIII
- ensure that source units are operated in such a manner that their contributions to air pollution are minimized;
- recognize that it is the responsibility of the source to implement operating and maintenance procedures according to good air pollution control practices; and
- incorporate any elections made in the approved application by reference.

(B) Emission Limits and Emission Control Requirements.

The requirements set forth under this condition serve to:

- establish emission controls required for Phase 1 (based on C.P. #185A and the approved application) as requirements of the permit, and to account for revised control requirements that will become effective during Phase 2;
- establish operating and maintenance requirements for all required emission controls;
- incorporate applicable emission limits from Article 2, Sections 20 and 24 of the LLCAPCPRS; and
- reference applicable emission limits and emission controls set forth in Federal Regulations.

(C) Monitoring and Record Keeping Requirements.

The requirements set forth under this condition serve to:

- establish the means by which the owner/operator will demonstrate ongoing compliance with the opacity limit in Condition XXVII(B)(4);
- establish the means by which the owner/operator will demonstrate ongoing compliance with PM and SO_X limits in Conditions XXVII(B)(2)-(3) and XXVII(B)(5);
- ensure that emission units and emission control units are operated and maintained in a manner that is consistent with manufacture specifications and/or good air pollution control practices, and the documentation of such operation and maintenance is maintained;
- ensure that the owner/operator maintains adequate records to demonstrate compliance with Condition XXVII(A)(3);

- ensure a high level of integrity, accuracy, and completeness for all required monitoring record, and that such records are maintained for no less than the 5-year statute of limitations set forth in 28 U.S.C. §2462; and
- reference applicable monitoring and record keeping requirements set forth in Federal Regulations.

(D) Notification and Reporting Requirements.

The requirements set forth under this condition serve to:

- reiterate the requirement that the owner/operator is to submit an annual emission inventory, and that the emission inventory includes any emissions from equipment associated with 'Phase 2' that may occur prior to the formal 'startup of operation' of OC2; and
- reference applicable notification and reporting requirements set forth in Federal Regulations.

(E) Other Requirements.

The requirements set forth under this condition serve to:

- establish the duration of the applicability of the permit conditions;
- ensure that the Department is aware of any changes at this source that would result in significant changes to actual emissions as well as the source's potential to emit, including changes to application materials; and
- ensure timely compliance with any requirements that would require additional emission controls or monitoring, beyond what has been established in the proposed permit.

(F) Requirements of the New Source Performance Standard (NSPS) set forth in Title 40, Part 60 of the Code of Federal Regulations (40 CFR Part 60).

The requirements set forth under this condition serve to incorporate applicable requirements of 40 CFR Part 60, Subparts A and IIII into the permit by reference, as they apply to OC1-EPEG1 and OC1-EPFP1. The conditions that apply (refer to Attachment D of the proposed permit) are based on the following applicability criteria:

- These are compression ignition (diesel) engines that are subject to this subpart due to the date of construction and engine manufacture; and
- OC1-EPEG1 meets the definition for an 'emergency stationary internal combustion engine', and OC1-EPFP1 meets the definition of a 'fire pump engine'.

(G) Requirements of the National Emissions Standards for Hazardous Air Pollutants for Source Categories (Source Category NESHAPs) set forth in Title 40, Part 63 of the Code of Federal Regulations (40 CFR Part 63).

The requirements set forth under this condition serve to incorporate applicable requirements of 40 CFR Part 63, Subparts A and ZZZZ into the permit by reference, as they apply to OC1-EPEG1 and OC1-EPFP1. The

conditions that apply (refer to Attachment E of the proposed permit) are based on the following applicability criteria:

- The facility will be an area source of HAP emissions; and
- The engines are considered 'new stationary RICE' based on the combination of the HAP area source classification and the date of construction of the engines.

XXVIII. – Requirements for 'Phase 2 – OC1 and OC2 Operations'. These conditions apply to the facility and emission unit(s) identified as 'Permitted Emission Units' for 'Phase 2' on pages 3-5 of the proposed permit.

(A) Operating Requirements, Throughput Limits, and/or Work Practice Standards.

The requirements set forth under this condition serve to:

- establish allowable fuel and material types, processing rates that are consistent with the owner/operator's approved permit application, and the provided supporting documentation;
- incorporate elected limits on hours of operation from the approved application as a requirement of the permit;
- incorporate fuel requirements established in 40 CFR 60 Subpart IIII
- ensure that source units are operated in such a manner that their contributions to air pollution are minimized;
- recognize that it is the responsibility of the source to implement operating and maintenance procedures according to good air pollution control practices;
- incorporate any elections made in the approved application by reference; and
- reference any applicable operating requirements, throughput limits, and work practice standards set forth in Federal Regulations.

(B) Emission Limits and Emission Control Requirements.

The requirements set forth under this condition serve to:

- establish emission controls required for Phase 2 based on the approved application as requirements of the permit;
- establish operating and maintenance requirements for all required emission controls (*Note: the exception provided for in Conditions XXVIII(B)(6)(a-b) are consistent with the approved application, in that the flare will only be used during periods of startup, shutdown, and malfunction, while the thermal oxidizer will be used at all other times*);
- incorporate applicable emission limits from Article 2, Sections 20 and 24 of the LLCAPCPRS; and
- reference applicable emission limits and emission controls set forth in Federal Regulations.

(C) Monitoring and Record Keeping Requirements.

The requirements set forth under this condition serve to:

- establish the means by which the owner/operator will demonstrate ongoing compliance with the opacity limit in Condition XXVIII(B)(4);
- establish the means by which the owner/operator will demonstrate ongoing compliance with PM and SO_X limits in Conditions XXVIII(B)(2)-(3) and XXVIII(B)(5);
- ensure that emission units and emission control units are operated and maintained in a manner that is consistent with manufacture specifications and/or good air pollution control practices, and the documentation of such operation and maintenance is maintained;
- ensure that the owner/operator maintains adequate records to demonstrate compliance with Condition XXVIII(A)(3);
- ensure a high level of integrity, accuracy, and completeness for all required monitoring record, and that such records are maintained for no less than the 5-year statute of limitations set forth in 28 U.S.C. §2462; and
- reference applicable monitoring and record keeping requirements set forth in Federal Regulations.

(D) Notification and Reporting Requirements.

The requirements set forth under this condition serve to:

- reiterate the requirement that the owner/operator is to submit an annual emission inventory, and that the emission inventory includes any emissions that may occur prior to the formal 'startup of operation' of OC2, as well as facility-wide emissions after start-up of OC2;
- establish requirements for notifications of anticipated startup and actual startup, which allows the Department to document the date upon which the Phase 2 requirements become applicable; and
- reference applicable notification and reporting requirements set forth in Federal Regulations.

(E) Other Requirements.

The requirements set forth under this condition serve to:

- establish the duration of the applicability of the permit conditions;
- ensure that the Department is aware of any changes at this source that would result in significant changes to actual emissions as well as the source's potential to emit, including changes to application materials;
- ensure timely compliance with any requirements that would require additional emission controls or monitoring, beyond what has been established in the proposed permit.

(F) Requirements of the New Source Performance Standard (NSPS) set forth in Title 40, Part 60 of the Code of Federal Regulations (40 CFR Part 60).

The requirements set forth under this condition serve to incorporate applicable requirements of 40 CFR Part 60, Subparts A, Kb, and IIII into

the permit by reference, as they apply to the liquid hydrocarbon storage tank (Subpart Kb) and to the engines listed in Conditions XXVIII(F)(2)(a-g) (Subpart IIII). The conditions that apply (refer to Attachment D of the proposed permit) are based on the following applicability criteria:

For Subpart Kb:

- the construction date of the tank will occur after the applicability date;
- the size of the tank exceeds the applicability thresholds; and
- the vapor pressure of the liquid stored exceeds 3.5 kPa, but is less than 5.2 kPa.

For Subpart IIII:

- these are compression ignition (diesel) engines that are subject to this subpart due to the date of construction and engine manufacture; and
- OC2-EP07 meets the definition of a 'fire pump engine', while all other engines meet the definition for an 'emergency stationary internal combustion engine'.

(G) Requirements of the National Emissions Standards for Hazardous Air Pollutants for Source Categories (Source Category NESHAPs) set forth in Title 40, Part 63 of the Code of Federal Regulations (40 CFR Part 63).

The requirements set forth under this condition serve to incorporate applicable requirements of 40 CFR Part 63, Subparts A and ZZZZ into the permit by reference, as they apply to the engines listed in Conditions XXVIII(F)(2)(a-g). The conditions that apply (refer to Attachment E of the proposed permit) are based on the following applicability criteria:

- The facility will be an area source of HAP emissions; and
- The engines are considered 'new stationary RICE' based on the combination of the HAP area source classification and the date of construction of the engines.

XXIX. – Source-Wide Requirements. These conditions apply generally to the facility, with instances of specific applicability noted in select conditions:

(A) Insignificant Activity Requirements.

The requirements set forth under this condition serve to:

- ensure that the Department receives a full and accurate accounting of activities/equipment installed subsequent to issuance of the permit, for which exact specifications or numbers are unavailable at the time of proposed permit issuance.

(B) Department Authorities.

The requirements set forth under this condition serve to:

- establish the legal basis for the Department's ability to perform inspections, review records, take action to control air pollution discharges, require testing and sampling, and perform permitting actions.

(C) Performance Testing Requirements.

The requirements set forth under this condition serve to:

- establish requirements, conditions, and exceptions for performance testing at the proposed facility, which have been deemed necessary to ensure that potential to emit is limited to such quantities as provided in the approved application, and to ensure the facility's compliance with the NAAQS.

6.03 – Attachments

- Attachments A and B: These attachments are provided to establish maximum processing rates and emission control requirements that are consistent with the approved application. These tables serve to identify which assets (equipment) will be associated as emission units to emission control units, and to establish minimum emission control efficiencies. The two attachments separate out the differing requirements from Phase 1 to Phase 2.
- Attachment C: This attachment serves to establish the visible emissions monitoring protocol to be used until such time that an operating permit is issued for this facility. The owner/operator may choose to continue using the procedures established in Attachment C as requirements of the operating permit.
- Attachments D and E: These attachments are provided to incorporate applicable federal regulations by reference, including applicable sections, subsections, and paragraphs. The incorporated requirements have been based on the applicability criteria described earlier in Section 6.02.

Section 7 – Summary of Permit Conditions Enforceable by Agency

(1) LLCHD (Local) – All conditions indicated in this permit.
(2) EPA (Federal) – All conditions indicated in this permit.

Section 8 – Compliance Assurance Monitoring

The Compliance Assurance Monitoring (CAM) requirements set forth under 40 CFR Part 64 only applies to operating permit actions, and thus is not an applicable requirement under this permit.

Section 9 – Pollution Prevention Opportunities

The Department encourages the owner/operator to continually examine its operations for pollution prevention opportunities. The Department's Technical Assistance Program can provide resources to aid the facility in exploring available pollution prevention options.

Section 10 – Air Quality Program Recommendation

The Department proposes approval of a construction permit for this facility. Enforceable permit conditions have been provided in the draft permit. A final determination on this permit will be made following the opportunity of the public to comment on the draft permit, and any comments received have been addressed.

Section 11 – Public Participation

The following notice is scheduled for publication in the **June 4, 2021** edition of the Lincoln Journal Star, which is a newspaper of general circulation in Lancaster County, Nebraska.

This notice, along with the draft permit, statement of basis, and permit application will also be made available on the Lincoln-Lancaster County Health Department (LLCHD) Air Quality Program website at the following URL:

https://www.lincoln.ne.gov/City/Departments/Health-Department/Environmental/Air#section-6

NOTICE OF INTENT TO ISSUE PERMIT

LINCOLN-LANCASTER COUNTY HEALTH DEPARTMENT (LLCHD)

A. In accordance with Article 2, Section 14 of the Lincoln-Lancaster County Air Pollution Control Program Regulations and Standards (LLCAPCPRS), the LLCHD gives notice of the preliminary determination to approve the following permitting action(s) for the source identified in item 'B' below. The 30-day public comment period commences June 4, 2021 and ends on July 4, 2021.

B. Issuance of the proposed permit allows for construction at the subject emission source within Federal, State and Local requirements. Provided below are the name, address, and the North America Industry Classification System (NAICS) code describing the nature of business at the subject emission source:
   1. Owner/Operator Name: Monolith Nebraska, LLC
   2. Source Name: Monolith Olive Creek 1 (OC1) and Olive Creek 2 (OC2)
   3. Source Address: 27077 SW 42nd Street, Hallam, NE 68368
   4. NAICS Code(s): 325108 – Other Basic Inorganic Chemical Manufacturing; and 325211 – Nitrogenous Fertilizer Manufacturing

C. Potential emissions exceed the construction permit thresholds set forth under Article 2, Section 17 of the LLCAPCPRS. However, the net emissions increase is lower than the significance thresholds established for Prevention of Significant Deterioration of Air Quality (PSD) construction permits. As a result, the proposed project is not subject to PSD permitting, and is being permitted under minor New Source Review procedures and requirements.

D. The proposed permit will allow for net increases in emissions of the following regulated air pollutants in the associated quantities. Any regulated pollutants not listed herein either will not be emitted from the permitted emissions units, or emissions will be negligible. All quantities are in units of tons per year (tpy).

Particulate matter <10 micrometers in diameter (PM_{10})	28.20 tpy
Particulate matter <2.5 micrometers in diameter ($PM_{2.5}$)	21.92 tpy
Nitrogen Oxides (NO_X)	85.06 tpy
Sulfur Oxides (SO_X)	0.85 tpy
Volatile Organic Compounds (VOCs)	6.46 tpy
Carbon Monoxide (CO)	54.03 tpy
Lead (Pb)	<0.01 tpy
Greenhouse Gases (as CO_2 equivalents)	121,756.00 tpy
Greatest Single Hazardous Air Pollutant (HAP)	8.91 tpy
Total Combined Hazardous Air Pollutants (HAPs)	18.63 tpy

E. The proposed permit, statement of basis, permit application, and a copy of this public notice document are available online at: http://lincoln.ne.gov, keyword search "air". Those materials are also available for inspection during business hours at the office of the LLCHD at 3131 O Street, Lincoln, NE 68510. Telephone inquiries regarding this public notice may be directed to the Air Quality Program at (402) 441-8040. If alternate formats of materials are needed, please notify the Department by calling (402) 441-8040 or (402) 441-6284 for TDD users.

F. Within the 30-day public comment period, any interested person, agency, or group may submit comments on the proposed permit(s), or request or petition the Director of the LLCHD for a public hearing in accordance with item 'G' below. Comments on the proposed permit(s) may be mailed to the attention of the Air Quality Program Supervisor at the address provided in item 'E' above, or submitted via e-mail to health@lincoln.ne.gov using the subject line 'Comment on Air Quality Permit'. Individuals commenting via e-mail are asked to provide their home address and phone number for follow-up correspondence.

G. Requests for public hearing must be made in writing, and must state the nature of the issues to be raised and all arguments and factual grounds supporting their position. If a public hearing is granted by the Director, the hearing will be advertised by public notice at least 30 days prior to its occurrence.